APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SHANG, ANNAN Q

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 July 2002</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-32</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-32</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
    application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)		4)☐ Interview Summary (PTO-413) Paper No(s). _____ .	
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)		5)☐ Notice of Informal Patent Application (PTO-152)	
3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .		6)☐ Other: .	

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act

of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily

published under 35 U.S.C. 122(b). Therefore, this application is examined under 35

U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2.   Claims 1-5, 7-10, 12-16, 18, 19 and 21-31 are rejected under 35 U.S.C. 102(e)

as being anticipated by Loukianov (6,249,526).

As to claim 1, note the Loukianov reference Figures 1-3, which discloses a

versatile time division multiple access slot assignment unit, a method for transporting

Internet Protocol data over a subscriber television system including a headend, a

transmission network, and a plurality of Home Communication Terminals (HCTs), with

at least one HCT authorized for receiving the Internet Protocol data. The claim method

comprising the steps of... is met as follows; a server in the headend 110 establishes a

subnet connection for transporting the Internet Protocol data to an external network,

Internet where the external network is different from the transmission network, note

Figure 1 and col.2, lines 15-31, the headend 110 receives a request for an Internet

Protocol connection from the authorized Home Communications Terminal (HCT),

Clients 140A1-140AB, the headend assigns an Internet Protocol address to the

authorized HCT for the duration of the Internet connection, note col. 2, lines 39-57

plurality of clients access upstream channel on Time Division Multiple Access (TDMA)

which expires at the end of the time slot. Loukianov, further teaches establishing a route

for Internet Protocol data from the Client to the server in the headend 110 to the

authorized Client over the transmission network, transmitting from the headend 110 to

the authorized Client the information regarding the route for the Internet Protocol

connection, note col. 2, line 54-col. 3, line 5, communicating between the authorized

Client and the external network, Internet, via the route and the subnet connection, and

releasing the route and assigned Internet Protocol address upon termination of the

Internet Protocol connection, note col. 3, lines 6-40.

As to claim 2, Loukianov further discloses a method where the IP data is

encapsulated and communicated between the authorized Client Terminal and the

headend 110 within a digital data stream that includes television programming, note col.

2, lines 15-31 and col. 4, lines 8-33.

As to claim 3, Loukianov further discloses a method where the IP data is

encapsulated into MPEG transport streams, note col. 4, lines 20-30.

As to claim 4, Loukianov further disclose a method where the step of assigning

an IP address includes correlating the assigned IP address to a Media Access Control

(MAC) address associated with the authorized Client Terminal, note col. 3, lines 25-40.

As to claim 5, Loukianov inherently teaches a method where the step of establishing the route IP data includes establishing and using a portion of continuous feed session for the IP data from the server to the Client Terminal, note col.2, line 39-col. 3, line 25 and col. 4 line 58-col. 5, line 6.

As to claim 7, Loukianov further discloses a method where the step of establishing a route includes using a protocol data from the authorized Client Terminal to the server, the protocol being selected from TDMA, note col. 2, lines 32-43

As to claim 8, Loukianov inherently teaches a method where the step of establishing a route for IP data includes establishing and using a session security key uniquely associated with the route, note col. 2, lines 54-col. 3, line 24 and col. 4 line 58-col. 5, line 6.

As to claim 9, note the Loukianov reference Figures 1-3, which discloses a versatile time division multiple access slot assignment unit, a method for transporting Internet Protocol data over a subscriber television system including a headend, a transmission network, and a plurality of Home Communication Terminals (HCTs), with at least one HCT authorized for receiving the Internet Protocol data. The claim method comprising the steps of...is met as follows; a server in the headend 110 establishes a subnet connection for transporting the Internet Protocol data to an external network, Internet where the external network is different from the transmission network, note Figure 1 and col.2, lines 15-31, the headend 110 receives a request for an Internet Protocol connection from the authorized Home Communications Terminal (HCT), Clients 140A1-140AB, including a Media Access Control (MAC) address associated

with the authorized Client Terminal, note col. 3, lines 25-40, the headend assigns an

Internet Protocol address to the authorized HCT for the duration of the Internet

connection and maintains a database relationship between the assigned Internet

Protocol address and the MAC address associated with the authorized Client Terminal,

the duration of the Internet Protocol connection, note col. 2, lines 39-57 and col. 3, lines

25-40, plurality of clients access upstream channel on Time Division Multiple Access

(TDMA) which expires at end of the time slot. Loukianov, further teaches establishing a

downstream route for IP data from the server to the Client terminal over the

transmission network within a downstream bandwidth, where the downstream

bandwidth includes at least a portion of a television program, note col. 4, lines 8-57,

establishing an upstream route for the Internet Protocol data from the authorized Client

Terminal to the server over the transmission network within an upstream bandwidth,

where the upstream route uses a protocol selected from TDMA, note col. 2, lines 22-63

and col. 3, line 6-25, transmitting from the headend 110 to the authorized Client

Terminal information regarding the downstream and the upstream route for the Internet

Protocol connection, note col. 2, line 54-col. 3, line 25, communicating the IP data

between the authorized Client Terminal and the server via the downstream route,

where the IP data is encapsulated into packets, communicating the IP data between the

server and the external network via the subnet connection and releasing the assigned

IP address, the downstream route and the upstream route upon termination of the

Internet Protocol connection, note col. 2, line 36-col. 3, line 40.

As to claim 10, note the Loukianov reference Figures 1-3, which discloses a method of creating and removing IP data communications paths within a television system. The claim system comprising... is met as follows: the server in the headend 110 establishes a subnet connection between the television system and the external network, Internet and establishes a continuous feed session within the television system for transportation of the IP data, note Figure 1 and col. 2, line 54-col. 3, line 5. Headend 110 receives a request from the Client Terminal for an IP connection and assigns an IP address for the duration of the IP connection to the requester, Client Terminal, of the IP connection, designating a route including at least a portion of the continuous feed session for the IP data for the duration of the IP connection, communicating the IP data over the established subnet and designated route for the duration of the IP connection, and releasing the IP address assignment and the route designation within the television system upon termination of the IP connection, note col. 2, line 54-col. 3, line 40.

As to claim 12, note the Loukianov reference Figures 1-3 further discloses an application server for establishing, using and deleting an Internet Protocol data communications route within a television system between the application server and an authorized Home Communication Terminals (HCT) and between the application server and an external network. The claim application server comprising... is met as follows; headend 110 is a means for establishing an external communications route between an external network, Internet, and the application server located in a headend 110 of the system, for communicating IP data between the application server and the Internet using an IP address from the application server, and for releasing the external

communications route, note Figure 1 and col. 2, line 54-col. 3, line 40. Loukianov

inherently teaches a processor for requesting the establishment of an internal

communications route for between the authorized Client Terminal requesting an IP

connection and the applications server for the duration of the IP connection, releasing

the internal communications route upon termination of the IP connection, and for

communication IP data between the authorized Client Terminal and the application

server over the internal communications route, where the IP address for communicating

with the external network, Internet, is associated with the authorized Client Terminal for

the duration of the IP connection and is released upon termination of the IP connection

and means for encapsulating and un-encapsulating the IP data for communication

between the authorized Client Terminal and the application server, note col. 2, line

28-col. 3, line 40.

As to claim 13, Loukianov further discloses an application server where the

headend means for encapsulating and un-encapsulating the IP data uses MPEG

transport packets for the IP data, note col. 4, lines 20-30.

As to claim 14, Loukianov further discloses an application server where the

processor, inherent to headend 110, uses use MAC of the authorized Client Terminal to

associate with the IP address for communication with the external network, Internet note

col. 4, lines 8-48.

As to claim 15, Loukianov inherently teaches an application server where the

internal communications route uses at least a continuous feed session for

communications from the applications server to the Client Terminal, note col. 4 line

58-col. 5, line 6.

As to claim 16, Loukianov further an application server where the internal

communications route uses a protocol for communications from the authorized Client

Terminal to the applications server, the protocol selected from TDMA, note col. 2, lines

32-43.

As to claim 18, note the Loukianov reference Figures 1-3, which discloses a

versatile time division multiple access slot assignment unit, an application server for

establishing and using an Internet Protocol data communication route within a television

system between the application server and an authorized Home Communication

Terminals (HCT) and between the application server and an external network. The

claim application server comprising... is met as follows; a server in the headend 110 is a

means for establishing a subnet connection to an external network and further for

receiving a request for an Internet Protocol connection from the Client Terminal, the

headend 110 is a means for requesting establishment of an internal communications

route for IP data within the television system between the applications server and the

authorized Client Terminal where the internal communications route request is based on

the type of IP data connection required by the Client Terminal, note col. 2, line 54-col. 3,

line 40, the headend 110 authenticates and assigns unique address or set of addresses

for logical connection between headend, Client Terminal and the external network,

Internet. Loukianov further discloses memory at headend 110 for maintaining a

database of all IP addresses associated with the application server and maintaining the

relationship of the authorized Client Terminal and the assigned IP address associated

with the authorized Client Terminal at least for the duration of an IP connection, note col. 2, line 54-col. 3, line 40, and a means at headend 110 for encapsulating the IP data received from the external network for communication to the authorized Client Terminal and un-encapsulating the IP data received form the authorized Client Terminal for communication to the external network, Internet and a means for releasing the internal communications route for the IP data upon termination of the IP connection, note col. 2, line 54-col. 3, line 40 and col. 5, lines 7-23.

Claim 19 is met as previously discussed with respect to claim 3.

As to claim 21, note Loukianov reference Figure 1, further discloses a subscriber television system for communicating Internet Protocol data with an external network. The claim system comprising... is met as follows: The claimed "Home Communications Terminal (HCT)..." is met by Cable Modem Unit 300 which is capable of encapsulating and un-encapsulating the IP data, note figure 3 and col. 4, lines 8-57, a headend 110 where the head includes, an interface to an external network, Internet, for establishing a subnet connection to the external network and for communication the IP data with the external connection, means for establishing, maintaining, communicating over, and releasing a communications route from the applications server to the Cable Modem Unit within the subscriber television system, note col. 2, line 54-col. 3, line 40, means for, inherent to the headend 110, encapsulating and un-encapsulating the IP data for communication with the Cable Modem Unit 300 and a transmission network 120i-120A, note figure 1, for connecting the Cable Modem Unit 300 to the headend 110.

As to claim 22, Loukianov further discloses a subscriber television system where the headend means for encapsulating and un-encapsulating the IP data uses MPEG transport packets for the IP data, note col. 4, lines 20-30.

As to claim 23, Loukianov further discloses a subscriber television system where the MPEG transport packets for the IP data include in each MPEG transport packet header a MAC address associated with the Cable Modem Unit 300, note col. 4, lines 8-48 and col. 5, lines 7-23.

As to claim 24, Loukianov inherently teaches a subscriber television system where the headend 110 includes a subscriber television system controller for establishing and releasing the continuous feed session.

As to claim 25, Loukianov inherently teaches a subscriber television system where the continuous feed session supports multicast IP data from the external network, Internet, note col. 2, lines 44-57.

As to claim 26, Loukianov further inherently teaches a subscriber television system where the means for establishing, maintaining, communicating over, and releasing the communications route uses a portion of a continuous feed session, note col. 2, lines 54-col. 3, line 24 and col. 4 line 58-col. 5, line 6.

As to claim 27, Loukianov further discloses a subscriber television system where the means for establishing, maintaining, communicating over, and releasing the communications route uses a protocol for communications from the Client Terminal to the server, the protocol selected from TDMA, note col. 2, lines 32-43.

As to claim 28, Loukianov inherently teaches a subscriber television system where the means for establishing, maintaining, communicating over, and releasing the communications route allows the external network, Internet, using Dynamic Host Configuration Protocol to assign an IP address to the Cable Modern Unit.

As claim 29, Loukianov further discloses a subscriber television system where the means for correlating a public IP address associated with the headend to a MAC address associated with the Cable Modem Unit 300, note col. 3, lines 25-40.

As to claim 30, Loukianov inherently teaches a subscriber television system where Cable Modem Unit 300 includes a means for using and the headend includes a means for establishing and using a session security key uniquely associated with the route, note col. 2, lines 54-col. 3, line 24 and col. 4 line 58-col. 5, line 6.

As to claim 31, Loukianov further discloses a subscriber television system where the means for establishing, maintaining, communicating over, and releasing the communications route is responsive to the tuning of the Cable Modem Unit 300 and modifies the communications route based on the tuning of the Cable Modem Unit, note col. 3, lines 25-40 and col. 5, lines 6-40.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 6, 11, 17, 20 and 32 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Loukianov (6,249,526) as applied to claims 1, 9, 10, 12, 18 and 21

above, and further in view of Hakulinen (WO 97/20413).

As to claims 6, 11, 17, 20 and 32 Loukianov teaches all the claim limitations as

previously discussed above with respect to claims 1, 9, 10, 12, 18 and 21 respectively,

but fails to specifically teach the steps of establishing and releasing the route for the IP

data comprises Digital Storage Media-Command and Control (DSM-CC) signaling

techniques. However, note Hakulinen reference Figures 3 and 4, which discloses

packet switching system using telephonic and satellite transmission, teaches steps of

establishing and releasing the route for the IP data comprising DSM-CC signaling

techniques, note page 4, lines 6-28 and page 9, lines 4-24.

Therefore the examiner submits that it would have been clearly obvious to one of

ordinary skill in the art at the time of the invention to modify the system of Loukianov

with the teaching of Hakulinen in order to provide a storage for Internet addresses.

Response to Arguments

5.   Applicant's arguments with respect to claims 1-32 have been considered but are

moot in view of the new ground(s) of rejection discussed above.

Conclusion

6.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Beser (6,442,158) discloses a method and system for quality-of-service based

data forwarding in a data-over-cable system.

Okano et al (6,226,272) disclose a meter-rate billing system on a LAN system.

Loukianov et al (6,208,665) disclose a data synchronization unit for a headend.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Annan Q Shang whose telephone number is 703-305-

2156. The examiner can normally be reached on 700am-500pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John W Miller can be reached on 703-305-4795. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-746-5991

for regular communications and 703-746-5991 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the customer service whose telephone number is 703-

306-0377.

Annan Q. Shang
October 17, 2002

JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600